List of Contents

NUMBER 1

J. H. Kim and **S. B. Lee** 1 Prediction of crack opening stress for part-through cracks and its verification using a modified strip-yield model

Robert Firmature and **Sharif Rahman** 15 Elastic–plastic analysis of off-center cracks in cylindrical structures

F. D. Fischer and **F. G. Rammerstorfer** 41 A note on a simple recategorisation of cracks in fatigue analysis

Larissa Gorbatikh and **Mark Kachanov** 51 A simple technique for constructing the full stress and displacement fields in elastic plates with multiple cracks

Arne S. Gullerud, Xiaosheng Gao, Robert H. Dodds Jr and **R. Haj-Ali** 65 Simulation of ductile crack growth using computational cells: numerical aspects

I Calendar

NUMBER 2

N. W. Klingbeil and **J. L. Beuth** 93 On the design of debond-resistant bimaterials Part I: Free-edge singularity approach

N. W. Klingbeil and **J. L. Beuth** 111 On the design of debond-resistant bimaterials Part II: A comparison of free-edge and interface crack approaches

Ravindra Patankar and **Asok Ray** 129 State-space modeling of fatigue crack growth in ductile alloys

Y. L. Li, S. Y. Hu and **Y. Y. Yang** 153 Stresses around the bond edges of axisymmetric deformation joints

Michael A. Sutton, Michael L. Boone, Fashang Ma and **Jeffrey D. Helm** 171 A combined modeling–experimental study of the crack opening displacement fracture criterion for characterization of stable crack growth under mixed mode I/II loading in thin sheet materials

Antonio Bobet 187 The initiation of secondary cracks in compression

221 Calendar

NUMBER 3

L.-W. Wei and **M. N. James** — 223 A study of fatigue crack closure in polycarbonate CT specimens

Gustavo V. Guinea, Jaime Planas and **Manuel Elices** — 243 K_I evaluation by the displacement extrapolation technique

Ki-Ju Kang and **Hyeon Gyu Beom** — 257 Plastic zone size near the crack tip in a constrained ductile layer under mixed mode loading

D. N. dell'Erba and **M. H. Aliabadi** — 269 On the solution of three-dimensional thermoelastic mixed-mode edge crack problems by the dual boundary element method

J.-Cl. De Bremaecker, M. C. Ferris and **D. Ralph** — 287 Compressional fractures considered as contact problems and mixed complementarity problems

D. W. Nicholson, P. Ni and **Y. Ahn** — 305 Probabilistic theory for mixed mode fatigue crack growth in brittle plates with random cracks

Shin-Young Lee and **Ji-Ho Song** — 321 Crack closure and growth behavior of physically short fatigue cracks under random loading

347 Calendar

NUMBER 4

T. Fett — 349 Estimation of stress intensity factors for semi-elliptical surface cracks

Franz O. Riemelmoser, Peter Gumbsch and **Reinhard Pippan** — 357 Plastic deformation at short edge cracks under fatigue loading

T. Fett, D. Munz, R. D. Geraghty and **K. W. White** — 375 Influence of specimen geometry and relative crack size on the R-curve

X. H. Liu, Z. Suo, Q. Ma and **H. Fujimoto** — 387 Developing design rules to avert cracking and debonding in integrated circuit structures

H. K. Lee, K. S. Kim and **C. M. Kim** — 403 Fracture resistance of a steel weld joint under fatigue loading

421 Calendar

NUMBER 5

M. Lorentzon and **K. Eriksson** 423 A path independent integral for the crack extension force of the circular arc crack

Adrian Loghin, Ningsheng Zhang and **Paul F. Joseph** 441 A nonlinear finite element eigenanalysis of antiplane shear including higher order terms

H. Rajaram, S. Socrate and **D. M. Parks** 455 Application of domain integral methods using tetrahedral elements to the determination of stress intensity factors

Kentaro Yamada, Qiuliang Cao and **Naoki Okado** 483 Fatigue crack growth measurements under spectrum loading

499 Calendar

NUMBER 6

In Memoriam

E. E. Gdoutos and **N. P. Andrianopoulos** 501 Pericles S. Theocaris (1921–1999)

Xiaobo Yu and **Andras Abel** 503 Crack surface interference under cyclic mode I and steady mode II loading. Part I: Experimental study

Xiaobo Yu and **Andras Abel** 519 Crack surface interference under cyclic mode I and steady mode II loading. Part II: Modelling analysis

L. Tosal, C. Rodríguez, F. J. Belzunce and **C. Betegón** 537 Comparison of the static and dynamic fracture behaviour of an AE-460 structural steel

S. Roy Chowdhury and **R. Narasimhan** 551 A finite element analysis of quasistatic crack growth in a pressure sensitive constrained ductile layer

S. Kamiya, T. Yamauchi and **H. Abé** 573 Three-dimensional simulation of crack extension in brittle polycrystalline materials

B. L. Josefson, T. Svensson, J. W. Ringsberg, T. Gustafsson and **J. de Maré** 587 Fatigue life and crack closure in specimens subjected to variable amplitude loads under plane strain conditions

Short communication

J.-Cl. DeBremaecker and **M. C. Ferris** 601 A comparison of two algorithms for solving closed crack problems

607 Calendar

III Contents of Volume 66

VII Author Index